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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,459	10/21/2002	Grigoriy Grinberg	202-0310	4027

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EXAMINER

LIN, KUANG Y

ART UNIT

PAPER NUMBER

1725

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,459

Applicant(s)

GRINBERG ET AL.

Examiner

Kuang Y. Lin

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-17 and 27-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-17 and 27-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. Claims 1, 2, 4, 6-17, and 27-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Dalal et al or Siemers et al.

Each of the prior art references substantially shows the invention as claimed except that they do not disclose how the parts to be spray joined are formed. However, it would have been obvious to those of ordinary skill in the casting art that the parts can be either spray formed or conventionally cast depending on the designated final product to be obtained. With respect to claim 4, it is conventional to provide intermediate surfaces to improve the joining process. (see Koshiga et al). With respect to claim 6, it would have been obvious to obtain the optimal process parameter through routine experimentation depending on the thickness of the parts to be joined and the width of the welding deposit needed. With respect to claims 7-8, it is known to provide a reinforcing member at the joining area (see Sullivan). With respect to claim 9, it is known to provide mask to confine the spray to a defined area (see Palma). With respect to claim 11, it would have been obvious to obtain the optimal process parameters through routine experimentation. With respect to claims 14-15, it would have been obvious to provide a securing member as a part to be joined if a securing member is needed in the final product. With respect to claims 28, 29 and step (c) Of claim 36, Dalal et al do disclose to control cooling rate for the cast article (see col. 5, last paragraph). Thus, it would have been obvious to maintain the joining parts to an appropriate temperature such that to control the cooling rate thereof. It would have been obvious to obtain the optimal temperature of the parts, which

depending on the composition of the parts to be joined, through routine experimentation. With respect to claim 35, it is conventional to provide the interface surface with a sinusoidal shape such that to facilitate the welding process (see, for example, Vienneau).

2. Applicant's arguments filed July 10, 2003 have been fully considered but they are not persuasive.

a. In page 6, 4th paragraph of the remarks applicants stated that the instant invention is directed to a method of spray joining articles wherein at least one of the articles is a steel spray formed article. However, it is noted that except claims 36-38, rest of the claims do not include that limitation.

b. With respect to the arguments as appearing in page 7, 2nd complete paragraph through page 8, 2nd complete paragraph as well as page 11, 2nd and 3rd of the remarks, applicants' attention are directed to *In re Durden, jr.*, 226 USPQ 359 wherein the court states that a "new" process may still be obvious, even when considered "as a whole," notwithstanding that specific starting material or resulting product, or both, is not found in prior art. Thus, the instant process is deemed to be obvious in view of the prior art process.

c. With respect to the argument as appearing in page 8, last paragraph of the remarks, it is noted that only claims 36-38 limit to spray forming steel article. Further, the scope of all the claim does not include the limitations of level of oxide, porosity of the spray article, the tensile strength thereof and the phase transformation.

- d. With respect to the argument as appearing in page 9, 2nd complete paragraph of the remarks, Dalal et al do disclose to control cooling rate for the cast article (see col. 5, last paragraph). Thus, it would have been obvious to maintain the joining parts to an appropriate temperature such that to control the cooling rate thereof. Further, it would have been obvious to perform any finishing step after casting depending on the designated final product to be obtained.
- e. With respect to the angle of the intermediate surfaces (page 9, last paragraph of the remarks), it would have been obvious to obtain the optimal process parameter through routine experimentation depending on the thickness of the parts to be joined and the width of the welding deposit needed.
- f. With respect to the argument as appearing in page 10, 1st complete paragraph and page 11, 1st paragraphs of the remarks, the elements 30, and 56 in Sullivan is a back plate which function the same way as instant application does (see figure 7 of the instant application). With respect to claim 35, Vienneau shows that feature to be conventional.
- g. With respect to the argument as appearing in page 10, 2nd complete paragraph of the remarks, it would have been obvious to provide a securing member as a part to be joined if a securing member is needed in the final product.
- h. With respect to the argument as appearing in page 10, 3rd and 4th complete paragraphs of the remarks, Dalal et al do disclose to control cooling rate for the cast article (see col. 5, last paragraph). Thus, it would have been

obvious to maintain the joining parts to an appropriate temperature such that to control the cooling rate thereof. It would have been obvious to obtain the optimal temperature of the parts through, which depending on the composition of the parts to be joined, through routine experimentation.

- i. With respect to the argument as appearing in page 10, last paragraph of the remarks, it would have been obvious to perform any finishing step after casting depending on the designated final product to be obtained.
3. The patents to Olsen and Quarnstrom are cited to further show the state of the art.
4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

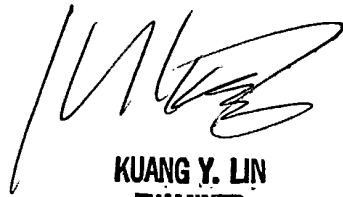
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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 703-308-2322. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas X Dunn can be reached on 703-308-3318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


KUANG Y. LIN
EXAMINER
GROUP 320
1725